

# Tradition Meets Modernity – Learning from Start-ups as a Chance to Create Digital Innovation in Corporations

*Research-in-Progress*

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## Abstract

*In the digital era, most corporations with established structures are in an innovation dilemma: Although they are aware of the importance of digital innovation, they face challenges in creating, with ever shorten innovation cycles. This may explain why corporations have been increasingly collaborating with start-ups with the often superficial aim of learning from them. While we know that different types of collaboration exist, empirically, we understand relatively little about the influential factors in such collaborations. Based on a qualitative study with 56 interviews, in this research-in-progress paper, we have taken a closer look at knowledge acquisition. For instance, we have found that an initially open-minded attitude of corporate employees towards collaboration with start-ups probably has an influence on the success of knowledge acquisition. With our findings, we hope to produce a stronger understanding of what factors influence the knowledge acquisition in the context of collaboration focused on creating digital innovations.*

**Keywords:** Digital innovation, collaboration, learning process, knowledge acquisition, qualitative study

## Introduction

Digitalization is the major driver of social and economic global development (Yoo et al. 2010). As a result, existing market conditions are especially changing profoundly. Therefore, incumbent firms that do not have an understanding of the big digital shift and are not adapting their management principles are massively threatened by the changing market conditions (Kuratko et al. 2009; Lucas Jr et al. 2013). For instance, in the banking industry, there is growing competition of online banks and non-industry market participants with digital business models. Thus, one of the biggest challenges for the traditional financial sector is to optimize the distribution channels, for example, through online media channels, and offer innovative products and services, particularly those implemented by new digital technologies (Abrell et al. 2016; Cuesta et al. 2015; Jiménez-Zarco et al. 2011; McDermott and Prajogo 2012; Tether and Howells 2007). This example, among others, illustrates that incumbent firms should rethink their business model and especially extend their traditional business model towards a digital business model (Bharadwaj et al. 2013). However, incumbent firms are faced with special challenges when it comes to the acquisition of knowledge around new technologies characterized by trends in information technology, such as social, mobile, analytics, and cloud computing (Caldwell 2013).

In the digital era, investments in intangible, knowledge-based capital are becoming increasingly important for firms (Alavi and Leidner 2001). In contrast, newly founded firms, or rather, start-ups, are at an advantage, because they are known for their flexible and innovative working methods and their ability to create digital innovations within a short time frame (Hunt 2013; Ries 2011). Furthermore, start-ups bring innovations to the market that affect the products, services, and business models of incumbent firms in particular (Kask and Linton 2013; Perez et al. 2013). Thus, it is of great interest for corporations to learn from start-ups (Karlsson et al. 2015). Against this background, more and more corporations have established various programs to facilitate collaboration with start-ups. These include, for example, the accelerator program Startup Garage, from the automobile manufacturer BMW, and the newly founded Merck Hackathon, from the pharmaceutical group Merck.

The overarching aim of our research is to stimulate discussion about managing start-ups in incumbent firms' innovation processes – especially in an open innovation context. More specifically, we have conducted a study for understanding the factors influencing the learning process in the context of collaboration between a corporation and start-ups focused on creating digital innovations. Accordingly, the goal of our research-in-progress paper is to shed more light on collaboration and to answer, firstly, the following research question: *What factors influence the knowledge acquisition of employees in an incumbent firm when learning from start-ups?* To answer this research question, among others, we observed a collaboration that was based on work-shadowing by 14 corporate employees in various start-ups that lasted four full working days. Thereby, we set up a qualitative study with an explorative approach and conducted interviews with the participants in this program before and after the work-shadowing. In this way, we have figured out that several factors influence the learning process with regard to knowledge acquisition in the context of a collaboration with the aim of creating digital innovations.

The first results show that employees' open-minded attitude toward collaboration with start-ups might affect the success of knowledge acquisition. Our research has the potential to gain new insight into a topic of crucial importance for fostering digital innovation within an incumbent firm.

This paper is structured as follows: Firstly, we have provided an overview of the theoretical approach and related work, which helps us categorize the topic within a frame of reference. This is followed by a description of our study design, data collection, and data analysis method. Afterwards, we have presented the initial approach to a research model and our first results. In addition, we have discussed the factors identified that influence the learning process with regard to knowledge acquisition from the perspective of corporate employees. Finally, we have described our research agenda and have concluded with a summary, potential contribution, and limitations of our study.

## Theoretical Approach

As mentioned above, in the context of increasing digitalization, the dominant advantage is how knowledge about digital innovation can be created by firms in order to implement creative ideas, tasks, or procedures (Cummings and Kiesler 2003). In this light, the term "innovation" in today's common parlance can be interpreted in many ways. Originally, the term was defined as the first use of a scientific invention in an

organization (Barnett 1953). Therefore, a scientific invention can be a new or improved product, process, or service (Barnett 1953; Rogers 2010). Based on the latest new technologies, there is yet another specific definition: digital innovation, which is a “product, process, or business model that is perceived as new, requires some significant changes on the part of adopters, and is embodied in or enabled by IT” (Fichman et al. 2014, p. 330). Information systems (IS) research has already established that digital innovation is typically influenced by various internal and external factors. For instance, the driving forces of service innovations in the mobile telecommunication industry have been investigated (Kim and Triche 2013), as well as the role of users and customers in digital innovation (Abrell et al. 2016).

Normally, the bigger a firm, the higher the probability that they will have sufficient relevant resources, such as budget and technical equipment, to create innovations. However, they might have lower innovative performance due to, for example, inertia (Christensen 2013). Incumbent firms are especially challenging, as they already have functioning business models and solid market positioning (Hanks et al. 1993). As a result of the challenges of incumbent firms, along with increasing digitalization, collaboration between firms emerge. Thereby, classical economic reasons for cooperative relations is access to external resources for generating competitive advantage (Chesbrough 2003; Wernerfelt 1984). Knowledge is one of these resources and can be acquired – in the case of a shortage – via networks (Grant 1996). Collaboration between corporations and start-ups can be classified as a functional interaction of cooperation (Nissen et al. 2014). Essentially, “cooperation” means that a relationship exists between the firms involved, with the aim of tackling operational tasks that go beyond normal market relations (Combs and Ketchen Jr 1999; Grant 1996).

When a traditional firm meets a modern business such as a start-up, there is a corporate culture clash caused by the different processes and infrastructures of both (Ries 2011). In addition, there are several challenges in the context of collaboration between incumbent firms and start-ups. This is especially due to immense gaps in work practices (Weiblen and Chesbrough 2015). However, the approach of open innovation can be appropriate for developing collaborations between incumbent firms and start-ups. The concept behind this approach is to open the innovation process up to external partners, such as primarily suppliers, customers, and other firms. Thereby, the management of innovation processes is seen as “the use of purposeful inflows and outflows of knowledge” (Chesbrough 2006). While several existing research works have examined whether firms can build stronger business models if they assess their own capabilities in a co-development partnership (Chesbrough and Schwartz 2007) and the impact of new, technology-based firms in innovation networks (Autio 1997), a research gap still exists regarding the factors influencing the learning process in the context of collaboration between corporations and start-ups. There is especially research potential for enhancing our understanding of knowledge inflows and outflows and the implications for performance in digital innovation. Therefore, there are three strategies through which organizations may open up their innovation processes: the inside-out, outside-in, and coupled process. While “inside-out” refers to the externalization of internal knowledge, “outside-in” is the integration of external knowledge into the innovation process, and the coupled process is a mixture of both (Gassmann and Enkel 2004). An analysis of open innovation literature has shown that the main research in open innovation focuses on the directions of knowledge flow; the research in knowledge management refers to types of knowledge and the management of knowledge (Enkel et al. 2009; Nonaka 1994; Nonaka and Takeuchi 1995). Still, there is a lack of understanding of collaboration between corporations and start-ups that can be classified as an outside-in process.

Meanwhile, there are several corporate start-up concepts that build a bridge between the two. For instance, hackathons of corporations are held with diverse teams within given time limits to solve corporate innovation challenges (Newton 2015). Moreover, there are concepts like corporate incubation and corporate venturing. While in corporate incubations, corporations provide flexible work space with additional value (e.g., marketing support) for start-ups (Bruneel et al. 2012); corporate venturing means an investment by corporations in a start-up (Kuratko et al. 2009). All of these concepts, among other forms, serve the primary purpose of corporations collaborating with start-ups in order to achieve return or learn from the start-ups (Davila and Epstein 2015). Recent studies show that corporations are interested in familiarizing themselves with new technologies, business models, and markets, as well as building their own new lines of business demand via complementary products and services (Antolin-Lopez et al. 2015; Chesbrough 2003; Nissen et al. 2014). Against this background, we focus on the learning process in the context of collaboration between incumbent firms. Therefore, learning is defined as the intended and individual or collective acquisition of mental, physical, or social knowledge, skills, and

abilities. From a psychological point of view, learning is seen as a process of relatively stable change in behavior, thinking, or feeling based on experience or newly gained insights and understanding (Schacter 2011). In the context of collaboration between corporations and start-ups, learning can be understood as the process by which people develop a deeper understanding of the market, technological, process, product, or organizational knowledge (Moos et al. 2012).

As described above, the learning process in the context of collaboration between corporations and start-ups is based on the acquisition of knowledge in order to gain new insights and understanding to expand their skills and abilities. More specifically, to investigate the factors influencing knowledge acquisition in the context of collaboration when creating digital innovation, the classification from a social psychology perspective is helpful. Accordingly, there are three levels of investigation: the intra-individual level, the interactional level, and the societal level. These levels are considered to be cross-linked. While the intra-individual level focuses on the investigation of individuals who are observable, such as in social perception, the interactional level focuses on the investigation of more than two people, such as collaboration-partner dyads. Beyond that, the societal level investigates social systems, such as firm organizations, in which people act (McKinlay and McVittie 2009). In this research-in-progress paper, we have focused on the intra-individual level because the learning process is based on the behavior of individuals.

To sum it up, collaborative partnerships often arise due to their ability to generate shared knowledge and support various types of learning-dependent processes (Berkes 2009; Grant 1996). Theoretical research on learning within inter-organizational collaboration between corporations and start-ups is still in its formative stages.

## **Study Design, Data Collection, and Analysis Method**

The following study has considered collaboration between a corporation and various start-ups. Thereby, we observed a work-shadowing program that took place in December 2015 for one week. Although this program has not been running relatively long, it has been appropriated for the study. This resulted from the fact that, within the last Corporate Startup Summit in Berlin in 2015, the work-shadowing program was awarded in the category “Best Corporate Entrepreneurship”. The category refers to the concepts of firms attempting to give their own employees an understanding of new horizons for their daily working routines. The annual winner is a program that has actually produced measurable results for innovative culture in corporations.

The program was offered by an incumbent firm that has been operating in industry transport and logistics and was established in 1994. Their headquarters is in Berlin (Germany); however, it mainly serves upper market segments in Europe. Furthermore, it employs around 300,000 people and earns a total revenue of around 40 billion euros per year (2015).

The primary aim of the work-shadowing program is for corporate employees to learn from start-ups and share their expert knowledge with start-ups. In the first two days, each employee of the incumbent firm received training in entrepreneurial skills and particularly insights into the characteristics of successful start-ups. The training was led by a lecturer on entrepreneurship and innovation. In addition, s/he has also been active as an entrepreneur in some start-ups. For her/his experience, s/he is tasked with training employees from the corporation. During the third to sixth days, the employees were released from their daily work routine to work-shadow in a start-up. Finally, the last day was open for reflection and discussions between participants about the completed week.

As we wanted to identify the factors influencing the learning process, with respect to knowledge acquisition and in the context of collaboration, we decided to set up a qualitative study with an explorative approach. This approach allowed us to make a detailed analysis of the relationships between the different factors and to consider contextual factors (Yin 2013). Traditionally, exploratory qualitative studies have been a legitimate way to conduct research in IS research and, due to subject-area complexity, are appropriate for our research describing phenomena, exploring processes, and, finally, providing further research questions for future work. In fact, the qualitative method enables researchers to analyze data material in areas where only limited knowledge exists (Neuendorf 2002). Accordingly, we decided to conduct semi-structured interviews. In so doing, we ensured that all the interviews covered the main topics. Simultaneously, this allowed us to address the peculiarities of the respective interviewees’

contexts. We used a standardized guideline for each group, which was developed following the guidelines provided by Yin (2013).

In our study, we conducted interviews with the employees of the corporation and the founders of various start-ups, as described above. Thus, we interviewed two groups, and, in this way, we were able to compare both of the perspectives on interaction within collaboration. While the employees applied directly for the program, we chose the start-ups based on their business orientation and foundation year. The start-ups were selected this way because the aim of the study is to present a uniform and industry-nonspecific picture of factors influencing the learning process.

The interviews were held on the first and last day of the work-shadowing period in December 2015. In total, the sample is comprised of 56 interviews. Of these interviews, 14 belong to the group “employees (E)” and 14 to the group “start-ups (S). Table 1 provides an overview of the 56 interviewees.

<b>Table 1. Overview of the Interviewees</b>					
<b>ID</b>	<b>Group E: Employees of the Corporation</b>			<b>Group S: Founders of Start-ups</b>	
	<b>Respondent's Position</b>	<b>Department</b>	<b>Experience in Years</b>	<b>Business Orientation</b>	<b>Foundation Year</b>
<b>1.</b>	Personal Developer	Human Resources	17	Digital Service for Human Resources	2015
<b>2.</b>	Project Manager	IT Management	5	Mobile App for Hotels and Restaurants	2015
<b>3.</b>	Personal Developer	Human Resources	1,5	Digital Service in Furniture and Moving	2014
<b>4.</b>	Project Manager	Training, Learning and Consulting	2	Mobile E-Learning	2013
<b>5.</b>	Project Leader	Training, Learning and Consulting	7	E-Learning System	2014
<b>6.</b>	Quality Auditor	Distribution	31	Online Services in Retail	2015
<b>7.</b>	Project Leader	Data Warehouse and IT Collaboration	8	IT (Smart) Products	2011
<b>8.</b>	Detailed Ressource Planner	Transport Network Infrastructure	3	Service in E-Commerce	2015
<b>9.</b>	Product Manager	Marketing	3	Software Development	2014
<b>10.</b>	Head of IT	IT Infrastructure	20	Service in Digitalization Projects	2013
<b>11.</b>	IT Manager	IT Infrastructure	3	Technology and Software Development	2013
<b>12.</b>	Personal Developer	Human Resources	2	Online Service in Real Estate Management	2015
<b>13.</b>	Product Manager	Marketing	10	Marketing Online Tool	2012
<b>14.</b>	Product Manager	Data Warehouse and IT Collaboration	25	IT Security	2014

As shown in Table 1, most of the interviewees from the incumbent firms had a proactive role and staffing-/budget-responsibility within their firms at the time of the interview. Beyond that, all the interviewed

founders of the start-ups had entrepreneurial skills and had been managing their business for at least one year. Besides that, all interviewees were directly involved in the collaboration. The mapping between the employees of the corporation and the start-ups were assigned based on the existing competence of the employees on the one hand, and, on the other hand, the desires of the start-ups in terms of the expertise needed.

The interviews were held in private spaces (when presented in a meeting room) and lasted between 20 and 45 minutes. All interviews were audio recorded. For easier analysis, the recorded material was transcribed. The interview data was analyzed using the qualitative content analysis technique developed by Neuendorf (2002) and Weber (1990). Based on a generalization and paraphrasing procedure, we have built a category system directly from the raw data material. In the first steps, the empirical background and formal characteristics of the material were determined; these steps have already been described above. Secondly, the individual statements were summarized as abstract codes, and we checked whether the codes could be summarized in relevant categories. Each code was related to a category when the aspects of description were mentioned by the interviewees. Table 2 illustrates an example of a coding agenda.

Table 2. Example of a Coding Agenda			
Category	Definition	Coding Rule	Example
Accelerated innovation process	Speed-up of occurrence or action, which means <ul style="list-style-type: none"> <li>▪ high rate of responsiveness or</li> <li>▪ high-speed performance when doing something in an innovation process.</li> </ul>	If a code has one of these aspects of definition points, then it belongs to the accelerated innovation process.	“[...] It takes time to be able to make quick decisions [...] For this reason, I must confess that we have low-performance when we are in an innovation process. However, I think we can learn from start-ups to be faster in our decisions through collaboration” (Interview E-12).

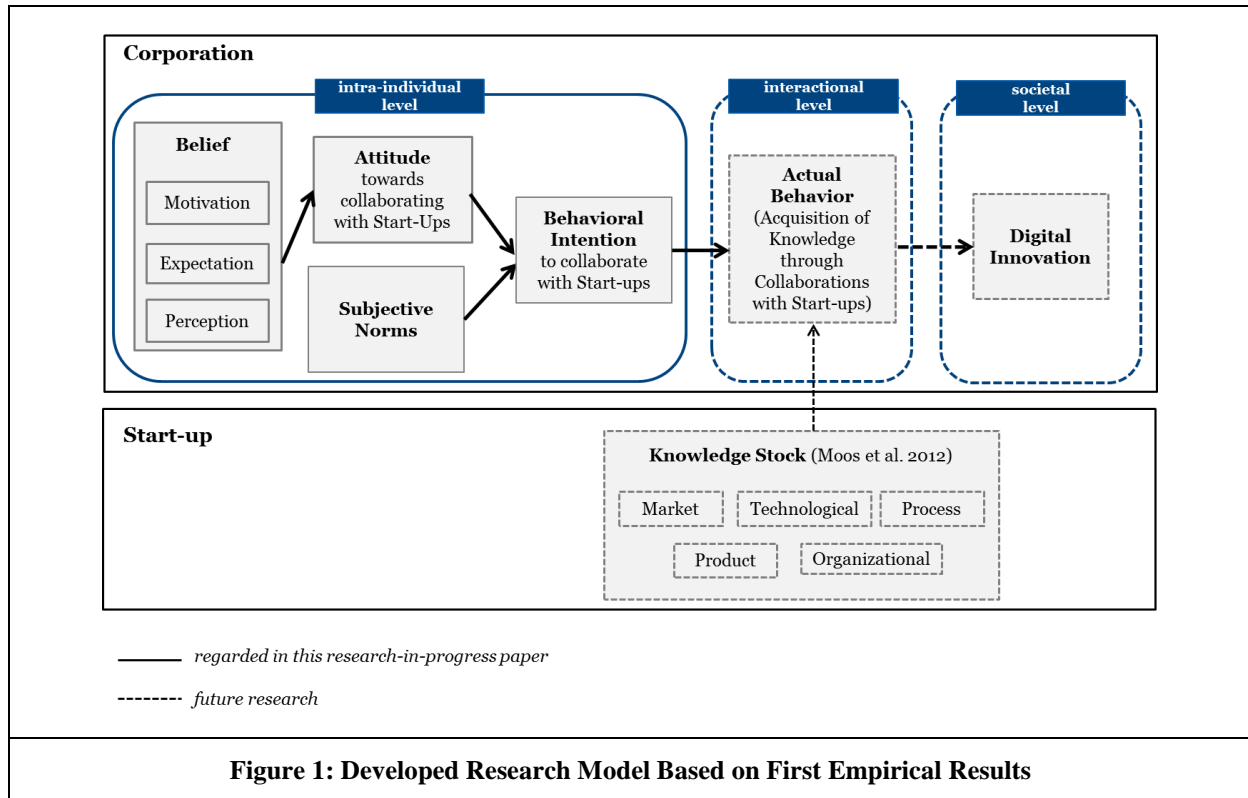
Thirdly, as required, the developed categories were revised and were grouped into main categories. For instance, the categories have been grouped and assigned to the main categories “Motivation”, “Expectation”, and “Perception”. Finally, relationships between the different main categories were analyzed.

To sum it up, the individual statements based on interviews were summarized as codes, then generalized in categories filtered by relevance and should represent the accumulated insights about factors influencing the learning process. The aim of the data analysis was to retain and provide essential content by abstracting a manageable collection of data. Thereby, a category system was obtained inductively from the raw data material. Accordingly, the categories were not predefined and derived from existing theory (Krippendorff 2012). We used code rules to reduce the raw data material into more manageable data from which to identify patterns and gain insight (Corbin and Strauss 2014; Mayring 2015). To achieve reliability in our analysis, multiple people (three in total) coded and analyzed the data material using a software tool (Richards 2014).

## First Empirical Results and Discussion

Presenting our first empirical results, we have provided an overview of our developed research model in the context of a collaboration between a corporation and start-ups. In the following, the influential factors are described in a compiled form to obtain an aggregated view. The research model illustrated below explores the relations between several factors, including the intra-individual, interactional, and societal levels, in order to explain the creation of digital innovation within a corporation. In this research-in-progress paper, we have mainly focused on factors that influence knowledge acquisition in the context of the learning process. Thus, we show our first empirical results that are relevant in a collaboration from the perspective of corporate employees within the intra-individual level. Our first findings have confirmed that the factors identified are associated with the Theory of Reasoned Action (TRA). This framework provides an important fundamental conceptual model for the examination the human behavior (Ajzen

and Fishbein 1980; Fishbein and Ajzen 1977; Van der Putte 1991). Figure 1 shows the summarized research model.



As Figure 1 illustrates, following the TRA framework, there are two main factors within the intra-individual level: attitude and subjective norms. Attitude towards collaborating with a start-up is defined as the individual's positive or negative feelings about behaving in a certain way. It is determined through an assessment of an employee's belief. For a subjective norm, it has been postulated that the opinions of the social component of one's professional environment, such as colleagues or supervisors, play a role for the individual. The factors illustrated together shape employees' behavioral intention of collaborating with start-ups and actual behavior in terms of the acquisition of knowledge (Ajzen and Fishbein 1980; Fishbein and Ajzen 1977).

With a closer look at the research model, the initialization begins with some identified factors that can be summarized in the construct "belief." In relation to this, we found some aspects that we assigned to **motivation** for participation. For instance, some employees were self-motivated, as one employee expressed in the following: "My motivation is grounded in myself. I'm strongly interested in start-ups and innovation" (Interview E-02). In the same line, other employees stated that they were triggered by work-related motives, such as emphasized by following statement: "[...] It's of great help for my job. My responsibility is to deal with innovation and issues that are outside everyday work, for example, new technologies" (Interview E-11). Furthermore, a few employees just wanted to "see if the start-ups' everyday work is actually hectic, have no guidelines, or no daily usual routine" (Interview E-10). Employees' **expectation** towards collaboration differed. For instance, one employee stated that they wanted to get an impression of how the daily routine of a start-up was, as indicated by the following: "I'm hoping to learn some techniques to create new ideas – that way you won't be able to reinvent my corporation, but you may solve some smaller problems" (Interview E-08). Some employees described their expectations with relatively detailed plans of what they wanted to learn from the start-up during the work-shadowing period: "I imagine getting to know lots of new IT tools that are unfamiliar to me so far. I would also like to know how they generated their business idea and then put it into practice" (Interview E-14). Other participants expected that the innovation process in their field would be accelerated after the collaboration: "[...] It takes time to be able to make quick decisions [...] For this reason, I must confess that we have low-performance when we are in an innovation process. However, I think we can learn from

start-ups to be faster in our decisions through collaboration” (Interview E-12). Moreover, we identified that the **perception** of start-ups probably has an effect on the attitude towards collaboration. This is emphasized by the following statement: “I find start-ups in general very likable. They take big personal risks because they are completely convinced by their product and their business. I find that impressive because [...] and they are fully committed” (Interview E-10). In the same line, one employee stated that “it’s really important to think outside the box and also easy to look at what the start-ups do. In principle, they are known to operate differently than established companies” (Interview E-07).

When considering the perceived benefits of the learning process by the employees illustrated above, we were able to find out that knowledge acquisition worked smoothly, as they had an open-minded attitude towards collaboration with start-ups characterized by belief in such collaboration. Therefore, the acquisition depends on the type of knowledge (Moos et al. 2012). For instance, after the work-shadowing, some employees stated that they had acquired technological knowledge, as the following statements emphasized: “During the work-shadowing, I was able to acquire new knowledge about technologies. For example, the start-up uses great IT tools for their project management. I think I will use these IT tools in my everyday work as well” (Interview E-10). Beyond technological knowledge, we were able to identify that employees were able to acquire market, process, products, and organizational knowledge as well. Hence, it was surprising that some employees stated that they could not imagine that they would be able to integrate most of what they had learned into their day-to-day work, as the following quotations emphasized “I have a lot of bureaucracy in my everyday work – whenever I want to order a new IT tool, I have to fill in multiple forms and wait for them to be signed. That’s a huge time factor and leads to low velocity when I’m dealing with a digital innovation in my everyday work” (Interview E-03). Nevertheless, in a retrospective view, most of the participants were positively disposed towards collaboration after the work-shadowing program and could state lots of things learned from the start-ups. Furthermore, they were convinced that they would be able to use the newly acquired knowledge when they went on to deal with digital innovations in their field.

Above all, in the context of the intra-individual level, our first findings serve as a baseline model that allows for exploration of the various factors within the collaboration between corporations and start-ups. In addition, this research model can be extended with the viewpoint of start-ups, as further results indicated that the start-ups also have a certain attitude towards collaboration.

## **Future Research Agenda**

As the theoretical approach and the first empirical results have indicated, interaction during collaboration between corporations and start-ups creates the potential for acquiring knowledge that is relevant to digital innovations.

The aim of our research has been to identify factors influencing learning process in the context of collaboration when creating digital innovation using classification at these three levels: intra-individual, interactional, and societal. Accordingly, our research object has been divided in three parts (McKinlay and McVittie 2009). In our further research, we will focus on the interactional as well as the societal level. Thereby, we want to integrate the perspective of start-ups into our research model. As presented above, the start-ups are affected by the expertise of employees of the corporation. With this in mind, we want to identify specific factors that also influence knowledge acquisition. Therefore, we are investigating knowledge-transfer flows both directions – this means the coupled-process in the context of an open innovation process (Gassmann and Enkel 2004). Based on this, we want to explore the benefit of the work-shadowing program for start-ups. In this way, we would be able to compare both views in order to investigate the success factors on the whole, and we would likely be able to provide a dyadic perspective in IS research. Especially in order to investigate a sustainable outcome, we plan to conduct interviews a third time with participants, twelve months after the work-shadowing. For this purpose, we want to focus our interviews on theoretically-based questions, which will be deducted from a literature review.

Finally, we will link our final findings to existing evidence and theories in terms of factors influencing the learning process with regard to knowledge acquisition. In this way, we want to explore and discuss the new findings within the context of open innovation literature.

It has been noted that our results are likely to be validated by a replay round of the work-shadowing program, to take place in the near future.



## Conclusion, Potential Contribution, and Limitation

As Henry Ford once remarked, "Getting together is a start, sticking together is progress, working together is a success." In the figurative sense, this quotation can be transmitted to concepts of collaboration between corporations and start-ups: In the digital era, the main point for success is specific knowledge needed for the creation of digital innovations within in firms. Start-ups can be an inspiration for incumbent firms that are increasingly collaborate with them in order to learn from them and thereby create digital innovations. Concepts of collaboration between incumbent firms and start-ups are emerging. However, it remains to be seen whether such collaborations are successful or sustainable – as intended – in creating digital innovations. Nevertheless, our first empirical results have illustrated that collaboration between corporations and start-ups could be a great approach to acquiring relevant knowledge for digital innovation.

This research-in-progress paper is the first approach to describing the factors influencing the learning process with regard to knowledge acquisition in the context of collaboration between corporations and start-ups. We see strong potential in this research to understand collaborations focused on creating digital innovations, especially in the field of open innovation. Our research could present a valuable contribution by pointing out relevant factors in terms of new formations of collaboration between incumbent firms and start-ups.

As in any study, our qualitative research has been constrained by some limitations that should be considered when wrapping up our study: Our work is focused on just one form of collaboration. It is conceivable that the results could be different if a similar investigation were conducted with other corporate start-up programs. Furthermore, due to the interpretive nature of our research, the results we have described represent the sense-making process of the researchers. Subjective personal judgments cannot be ruled out completely, even though we took great care to reflect the subjects' opinions as correctly as possible. Although our study is limited by its exploratory nature and focuses on one specific type of collaboration, our findings are potentially useful for gaining insights into the responsibilities of a corporate start-up program, as well as those of strategic managers who want to adjust their collaboration structures in order to enable the creation of digital innovation within their firms. Based on this, upcoming results could provide an understanding of specific factors and the anticipation of these factors in corporate start-up concept design for researchers and practitioners. As a result, with target-oriented concept design, the influential factors identified could be intensified or expanded upon.

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